# WASHINGTON STATE DEPARTMENT OF HEALTH OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS

#### ANNUAL GROWING AREA REVIEW

**PREPARED BY:** Donald J. Melvin, Environmental Specialist

AREA: Annas Bay

**YEAR ENDING:** December 31 2005

**CLASSIFICATION:** Approved

#### **ACTIVITIES IN THE GROWING AREA IN 2005:**

The portion of Annas Bay represented by stations 197 and 198 was downgraded to "Prohibited" in August. Closure response activities to identify and correct the pollution sources responsible for the downgrade have been initiated. Each sample station was sampled 6 times during 2005 in accordance with the NSSP systematic random sampling criteria. Annas Bay was closed for a total of 23 days due to flooding of the Skokomish River.

#### ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 summarizes the results of the most recent 30 water samples collected from the area. Table #1 shows that all stations in the "approved" portion of the area meet the water quality standard. The Table #1 summary also indicates that station #195 is threatened and station #203 is of concern due to elevated bacteria levels. Individual sampling results for station #195 are shown in Table #2.

#### CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

The high levels of bacteria responsible for the downgrade in classification and the threatened status of station #195 indicate the presence of active pollution sources. The nature and location of the sources is being investigated.

#### **CLASSIFICATION STATUS:**

	Well within the classification standards
	Meets standards but some concerns
$\boxtimes$	Meets standards but threatened with a downgrade in classification
	Fails to meet classification standards

#### REMARKS AND RECOMMENDATIONS:

The Skokomish River and the marine waters in Annas Bay near the river mouth are on the 303d list for fecal coliform.

#### TABLE 1

#### **SUMMARY OF MARINE WATER DATA (SRS)**

Growing Area: ANNAS BAY

Classification: Approved, Unclassified, Prohibited

# From 01/02/2001 To 12/12/2005 FECAL COLIFORM ORGANISMS/100 ML

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
195	Approved	30	1.7 - 49.0	8.3	31.0	Yes
196	Approved	30	1.7 - 79.0	4.4	17.0	Yes
199	Approved	30	1.7 - 350.0	3.4	14.0	Yes
200	Approved	30	1.7 - 49.0	2.8	8.0	Yes
201	Approved	30	1.7 - 22.0	2.2	5.0	Yes
202	Approved	30	1.7 - 32.0	3.7	13.0	Yes
203	Approved	30	1.7 - 49.0	4.6	20.0	Yes
204	Approved	30	1.7 - 220.0	2.5	8.0	Yes
205	Approved	30	1.7 - 11.0	2.3	4.0	Yes
206	Approved	30	1.7 - 49.0	5.3	18.0	Yes
299	Unclassified	14	1.7 - 33.0	3.7	15.0	*N/A
300	Unclassified	21	1.7 - 49.0	7.9	43.0	*N/A
197	Prohibited	30	1.7 - 240.0	11.0	65.0	No
198	Prohibited	30	1.7 - 350.0	8.2	34.0	Yes

#### All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

<sup>\*</sup> N/A - SRS criteria require a minimum of 30 samples from each station. \*

### TABLE 2

## **SUMMARY OF SHELLFISH GROWING AREAS WATER QUALITY STUDY RESULTS**

Growing Area: ANNAS BAY

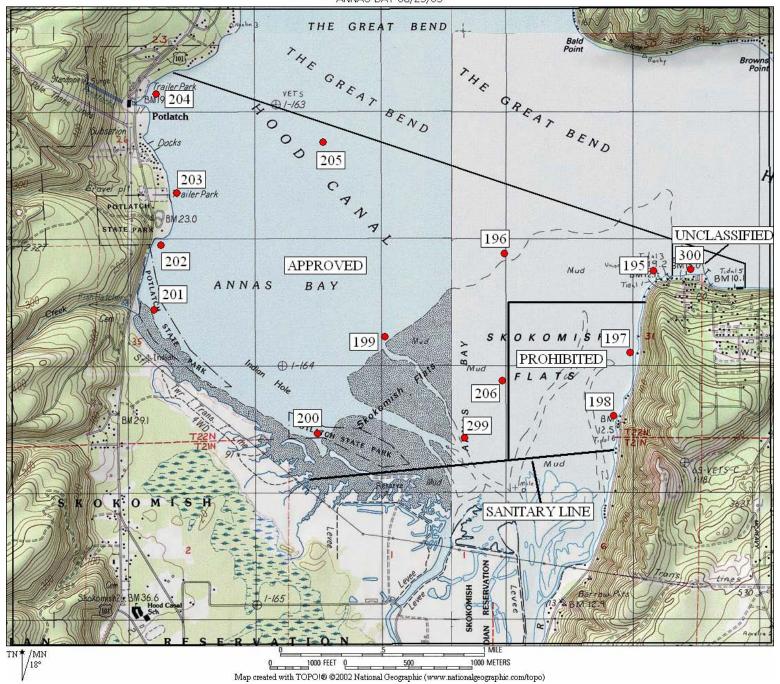
Sampling Station Number: 195

Classification: Approved

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
01/02/2001	10:04	Flood	2	8	10
03/14/2001	09:02	Ebb	2	8	6
05/29/2001	09:55	Flood	23	12	14
08/08/2001	10:28	Ebb	4.5	14	18
10/22/2001	12:05	Ebb	23	9	22
11/13/2001	13:08	Flood	6.8	9	16
02/19/2002	13:59	Ebb	7.8	8	16
04/18/2002	09:18	Ebb	2	8	3
05/02/2002	08:46	Flood	1.7	9	22
08/28/2002	09:15	Flood	23	16	24
10/23/2002	13:10	Ebb	13	11	8
11/06/2002	09:18	Ebb	49	10	15
01/14/2003	14:13	Ebb	1.7	6	0
05/21/2003	10:21	Ebb	4.5	11	25
05/22/2003	10:11	Flood	1.7	13	23
07/16/2003	09:24	Ebb	33	13	25
09/17/2003	09:54	Flood	49	11	18
11/12/2003	09:55	Ebb	7.8	7	30
02/23/2004	11:21	Ebb	4	7	4
03/16/2004	09:35	Flood	4.5	9	22
05/25/2004	09:14	Ebb	6.8	15	8
07/07/2004	09:49	Ebb	23	16	25
11/08/2004	10:41	Flood	7.8	9	12
12/06/2004	10:18	Flood	14	6	4
02/07/2005	08:42	Ebb	27	5	4
04/13/2005	09:34	Ebb	13	6	4
05/31/2005	10:16	Flood	4.5	13	24
08/22/2005	09:32	Ebb	17	17	25
11/07/2005	09:59	Flood	17	7	15
12/12/2005	11:05	Flood	6.8	5	12

Number of Samples: 30 Range: 1.7 - 49

Geometric Mean: 8.3 **Estimated 90th Percentile: 31** 



# Most recent five-year trend in fecal coliform pollution.

